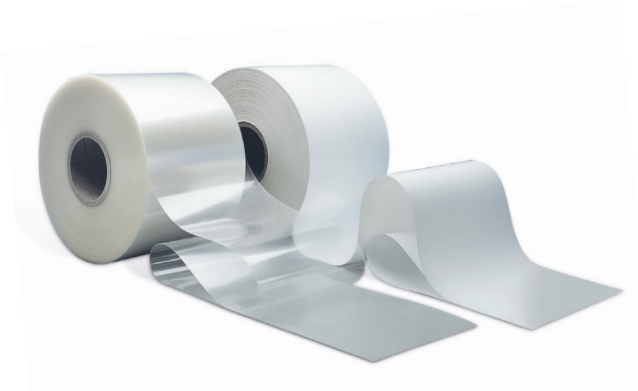
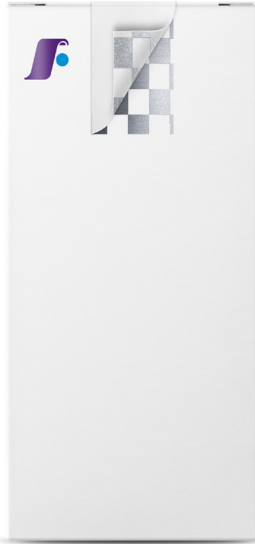


FLEXcon[®] PHARMcal[®]



Pharmaceutical Pressure-Sensitive Labeling Solutions



PHARMcal[®]

High-Performance Adhesive and Topcoat Technologies



Exceptional Printability

- Reliable topcoats for conventional & digital ink systems to enable cross-platform printability and reduced SKUs
- Chemical & abrasion resistance for long-term readability



Engineered Films

- Conformable, flexible films that contour to a variety of package types
- Dimensional stability for high-speed auto-dispense labeling applications



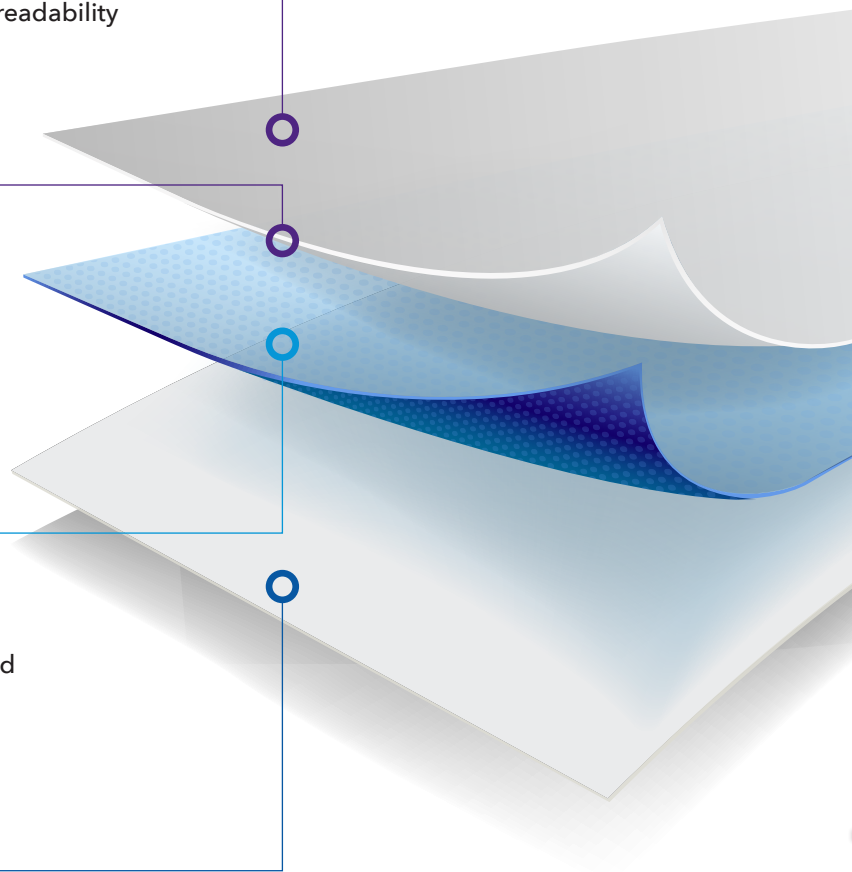
Robust Adhesion

- Adhesives developed specifically for the most challenging and demanding applications
- Durable anchorage to plastic, glass, and coated paperboard surfaces



Optimized Liners

- High tensile strength allows for continuous high-speed processing
- Suitable for high-speed diecutting, matrix stripping, and auto-dispensing



FLEXcon is Your Trusted Partner



Proven Performance

- Solutions tailored to the harshest drug storage conditions
- Products have been thoroughly tested on drug packaging surfaces under actual service conditions



Quality Assurance

- Stringent requirements on raw material quality and performance criteria
- Certificate of Conformance (CoC) to verify product performance upon request
- Change Management Process ensures consistent material performance



Technical Expertise

- Supplying the Healthcare industry for over 35 years
- Dedicated support from recommendation to qualification to scale-up

Consistent Quality

Change Management Process is designed to ensure consistent material performance.

Stringent Requirements

- Tight controls on quality and performance with raw material specifications and annual supplier audits

Advanced Notification

- Material suppliers communicate changes to raw components in advance

Thorough Review


- Supplier changes reviewed by R&D, Quality, and Manufacturing teams

Customized Test Plans

- Test plans in place to ensure consistent product performance

Applications

- FLEXcon's PHARMcal® portfolio consists of six unique product families based on end-use application.
- Each product family is comprised of a full range of high-performance materials engineered to meet all your pharmaceutical labeling needs.

	Product Family	Typical Applications	FLEXcon® Recommended Products
Small Diameter Labeling High-Performance Materials for Vials, Syringes, and Ampules	 PHARMcal® SUPREME	Syringes, Vials, and Ampules 	PHARMcal® SUPREME 069045 1.5 mil Clear Polyester, High Performance, Film Liner
			PHARMcal® SUPREME 000211 2.0 mil Clear Polypropylene, High Performance with Fluoresce, Film Liner
			PHARMcal® SUPREME 052434 2.0 mil Clear Polypropylene, High Performance, Film Liner
			PHARMcal® SUPREME 011974 2.3 mil White Polypropylene, High Performance, Film Liner
			PHARMcal® SUPREME 068639 2.6 mil White Polypropylene, High Performance, Film Liner
Large Diameter Labeling Printable Substrates for Over-the-Counter Drug Labeling	 PHARMcal® OTC	Pill Containers 	PHARMcal® OTC 068902 2.0 mil Clear Polypropylene, General Purpose, Film Liner
			PHARMcal® OTC 068904 2.0 mil Clear Polypropylene, General Purpose, Paper Liner
			PHARMcal® OTC 068903 2.3 mil White Polypropylene, General Purpose, Film Liner
			PHARMcal® OTC 068905 2.3 mil White Polypropylene, General Purpose, Paper Liner
Conceal Opaque Materials for Covering Existing Labels	 PHARMcal® CONCEAL™	Clinical Trials and Overlabeling 	PHARMcal® CONCEAL™ 069047 2.3 mil White Opaque Gloss Polypropylene, High Performance, Paper Liner
			PHARMcal® CONCEAL™ 069048 2.3 mil White Opaque Matte Polypropylene, High Performance, Paper Liner
Cryogenics & Cold Chain Engineered Materials for Extreme Storage Conditions	 PHARMcal® CryoFLEX™	Cryovials 	PHARMcal® CryoFLEX™ 000300 3.5 mil White Matte Polyethylene, Deep Freeze Permanent, Paper Liner
			PHARMcal® CryoFLEX™ 000302 2.3 mil White Polypropylene, Deep Freeze Permanent, Paper Liner
			PHARMcal® CryoFLEX™ 000301 2.0 mil Clear Polypropylene, Deep Freeze Permanent, Paper Liner
Security & Tamper-Evident Tamper-Evident Materials for Counterfeit Protection	 PHARMcal® TAMPERmark™	Pill Containers and Boxes 	PHARMcal® TAMPERmark™ 006126 2.0 mil Clear Polypropylene, Surface Destruct, Film Liner
			PHARMcal® TAMPERmark™ 069087 2.0 mil Clear Diacetate, Film Destruct, Paper Liner
			PHARMcal® TAMPERmark™ 069051 2.0 mil White Polyethylene, Film Destruct, Paper Liner
			PHARMcal® TAMPERmark™ 069052 2.0 mil White Polyester Film, Visible "VOID" Pattern, Paper Liner
			PHARMcal® TAMPERmark™ 069053 1.5 mil Silver Polyester Film, Visible Checkerboard Pattern, Paper Liner
Blood Bag Labeling Single-ply or Piggyback Constructions for Asset Tracking	 PHARMcal® BIOmark	Blood and Plasma Bags 	PHARMcal® BIOmark 069164 Piggyback, Removable Poly Liner, Your Film
			PHARMcal® BIOmark 069165 Piggyback, 3.0 mil White Polypropylene
			PHARMcal® BIOmark 069088 3.8 mil White Matte Polyethylene, Permanent, Paper Liner



PHARMcal® SUPREME High-Performance Materials for Vials, Syringes, and Ampules

- Conformable films contour around tight-radius containers
- High-performance adhesives prevent lifting and flagging
- Smooth print surface provides exceptional fine print readability and barcode scanning
- Clear film options provide optimum clarity for no-label look
- Polyester liner is ideal for labeling in clean room environments
- Sterilization compatible
- Two year storage stability
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE

	FILM			ADHESION				PRINT			PROCESS				TEMP	
	Clear Polypropylene	Clear Polyester	White Polypropylene	Glass	PP: COP, COC	Fluorescing Adhesive	ISO 10993 -5, -10	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	High-Speed Auto-Dispensing	High-Speed Matrix Stripping	Exceptional Die Cutting	Excellent On-Press Registration	-40°F to 212°F (-40°C to 100°C)	-40°F to 302°F (-40°C to 150°C)
PHARMcal® SUPREME 069045 1.5 mil Clear Polyester, High Performance, Film Liner		●		●	●			●	●	●	●	●	●	●		●
PHARMcal® SUPREME 000211 2.0 mil Clear Polypropylene, High Performance with Fluoresce, Film Liner	●			●	●	●		●	●	●	●	●	●	●	●	
PHARMcal® SUPREME 052434 2.0 mil Clear Polypropylene, High Performance, Film Liner	●			●	●		●	●	●	●	●	●	●	●	●	
PHARMcal® SUPREME 011974 2.3 mil White Polypropylene, High Performance, Film Liner			●	●	●		●	●	●	●	●	●	●	●	●	
PHARMcal® SUPREME 068639 2.6 mil White Polypropylene, High Performance, Film Liner			●	●	●		●	●	●	●	●	●	●	●	●	



PHARMcal® OTC Printable Substrates for Over-the-Counter Drug Labeling


- Exceptional print surface for high-end graphics
- Flexible, conformable films contour around cylindrical containers
- High-tack and high-peel adhesion to plastic packaging
- Polyester liner offers excellent roll tracking for tight print registration, high-speed matrix stripping, and high-speed auto-dispensing
- Bleached Kraft paper liner is backside printable for registration marks in auto-dispensing applications
- Service temperature range from -40°F to 212°F (-40°C to 100°C)
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE

	FILM		PRINT			LINER		PROCESS				
	Clear Polypropylene	White Polypropylene	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	1.2 mil Clear Polyester	2.5 mil White Kraft Paper	Thermal Printer Label Sensing	High-Speed Auto-Dispensing	High-Speed Matrix Stripping	Good Die Cutting	Exceptional Die Cutting
PHARMcal® OTC 068902 2.0 mil Clear Polypropylene, General Purpose, Film Liner	●		●	●	●	●			●	●		●
PHARMcal® OTC 068904 2.0 mil Clear Polypropylene, General Purpose, Paper Liner	●		●	●	●		●	●	●	●	●	
PHARMcal® OTC 068903 2.3 mil White Polypropylene, General Purpose, Film Liner		●	●	●	●	●			●	●		●
PHARMcal® OTC 068905 2.3 mil White Polypropylene, General Purpose, Paper Liner		●	●	●	●		●	●	●	●	●	



PHARMcal® Conceal™ Opaque Materials for Covering Existing Labels


- Metalized film provides high-opacity to hide original identifier on product packaging
- Thermal transfer printable topcoat offered in matte or gloss
- Matte coating accepts pen inking for trial comments
- Biocompatible adhesive mitigates risk of migration through packaging
- High-adhesive performance bonds to tight-radius glass or plastic containers
- Service temperature range from -40°F to 212°F (-40°C to 100°C)
- Products listed comply with 21 CFR 175.105†, REACH, RoHS/WEE, and ISO 10993-5,-10‡

	FILM		PRINT				PROCESS		
	White Matte Polypropylene	White Gloss Polypropylene	Thermal Transfer Resin or Wax /Resin	Conventional	Narrow-Format UV Inkjet	Accepts Pen and Marker	Thermal Printer Label Sensing	High-Speed Auto Dispensing	Good Die Cutting
PHARMcal® CONCEAL™ 069047 2.3 mil White Opaque Gloss Polypropylene, High Performance, Paper Liner		●	●	●	●		●	●	●
PHARMcal® CONCEAL™ 069048 2.3 mil White Opaque Matte Polypropylene, High Performance, Paper Liner	●		●	●	●	●	●	●	●



PHARMcal® CryoFLEX™ Engineered Materials for Extreme Storage Conditions

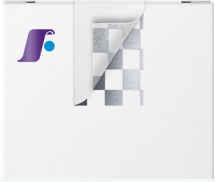
- High-performance adhesive is engineered to survive extreme temperature cycling
- Enables drug identification after cold temperature storage
- Ideal for cryogenic storage temperatures as low as -112°F (-80°C)
- High adhesion to glass and plastic containers
- Robust topcoat allows smudge proof and abrasion resistant thermal transfer printing
- Flexible white polyolefin ideal for pouch labeling
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE

	FILM			PRINT			PROCESS			TEMP	
	White Matte Polyethylene	Clear Polypropylene	White Polypropylene	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	Thermal Printer Label Sensing	High-Speed Auto-Dispensing	Good Die Cutting	-112°F to 176°F (-80°C to 80°C)	-112°F to 212°F (-80°C to 100°C)
PHARMcal® CryoFLEX™ 000300 3.5 mil White Matte Polyethylene, Deep Freeze Permanent, Paper Liner	●			●	●	●	●	●	●	●	
PHARMcal® CryoFLEX™ 000302 2.3 mil White Polypropylene, Deep Freeze Permanent, Paper Liner			●	●	●	●	●	●	●		●
PHARMcal® CryoFLEX™ 000301 2.0 mil Clear Polypropylene, Deep Freeze Permanent, Paper Liner		●		●	●	●	●	●	●		●



PHARMcal® TAMPERmark™ Tamper-Evident Materials for Counterfeit Protection


- Tamper-Evident materials ensures product authenticity through supply chain
- Material leaves "VOID" or checkerboard pattern on package surface
- Destructible films prevent relabeling onto counterfeit package
- High-adhesive bond onto plastic containers, cardboard and packaging materials
- Permanent adhesives suitable for closure seals on paper packaging
- Ideal for FDA 21CFR 211.132|| and EU FMD§ regulations for Tamper-Proof Labeling and Packaging

	FUNCTION			FILM				PRINT			PROCESS	
	Destructs/Prevents Relabeling	Tears Cardboard Surface	Leaves Visible Evidence	Polypropylene	Diacetate	Polyethylene	Polyester	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	Thermal Printer Label Sensing	Quilon®* Prevents Pick Off
 PHARMcal® TAMPERmark™ 006126 2.0 mil Clear Polypropylene, Surface Destruct, Film Liner		●		●				●	●	●		
PHARMcal® TAMPERmark™ 069087 2.0 mil Clear Diacetate, Film Destruct, Paper Liner	●	●			●				●		●	●
PHARMcal® TAMPERmark™ 069051 2.0 mil White Polyethylene, Film Destruct, Paper Liner	●	●				●		●	●	●	●	●
PHARMcal® TAMPERmark™ 069052 2.0 mil White Polyester, Visible "VOID" Pattern, Paper Liner			●				●	●	●	●	●	●
PHARMcal® TAMPERmark™ 069053 1.5 mil Silver Polyester, Visible Checkerboard Pattern, Paper Liner			●				●	●	●	●	●	●



PHARMcal® BIOmark Single-ply or Piggyback Constructions for Asset Tracking

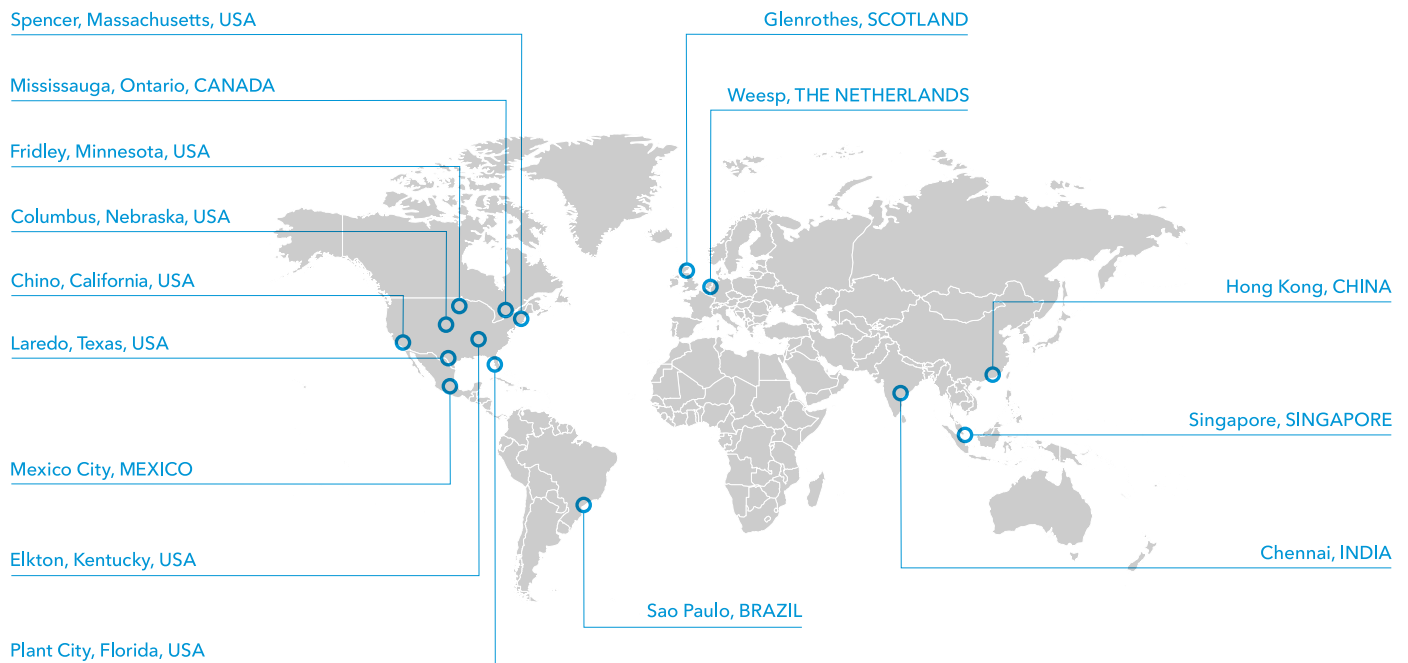
- Single-ply constructions allow label to be printed and applied directly on package
- Versatile piggyback constructions are offered with either a top layer printable white polypropylene, or adhesive layer to allow customer to apply their own film
- Passes centrifuge process
- Top surface liner can be stripped to expose adhesive surface for secondary label application
- Engineered for extreme temperature cycling and water submersion
- Service temperature range -40°F to 176°F (-40°C to 80°C)

	CONSTRUCTION		FILM		ADHESION		PRINT	
	Piggyback	Single-Ply	White Polyolefin	Your Film	Adhesive Base for Your Film	ISO 10993-5,-10 (Container Side)	Thermal Transfer Resin or Wax/Resin	Conventional
 PHARMcal® BIOmark 069164 Piggyback, Removable Poly Liner, Your Film	●			●	●	●		
PHARMcal® BIOmark 069165 Piggyback, 3.0 Mil White Polypropylene	●		●			●	●	●
PHARMcal® BIOmark 069088 3.8 mil White Matte Polyethylene, Permanent, Paper Liner		●	●				●	●

Supporting Businesses Globally

It takes an innovative spirit to try something no one else is willing to try, and that's exactly the spirit Myles McDonough had back in 1956 when he produced his first pressure-sensitive film product in his Spencer garage. **At a time when other film suppliers only wanted to produce commodity products** that could be run fast and at high volumes, **Myles had a vision - one where he would fill the needs of other innovators** who wanted to use pressure-sensitive films in new and different ways. These innovators needed a development partner to turn their ideas into reality.

Sixty-five years later, this spirit is still what sets FLEXcon apart. **Proudly serving industries from Packaging to Electronics and from Aerospace to Healthcare**, FLEXcon is a trusted manufacturing partner to help take your innovative ideas from concept to reality. **FLEXcon has been supplying the Healthcare industry with adhesives, tapes, films, and coating technologies for over 35 years** for applications that support Patient Care, Pharmaceuticals, Diagnostics and Consumer Wellness.



Product Performance and Suitability

All of the descriptive information, the typical performance data, and recommendations for the use of FLEXcon products shall be used only as a guide and do not reflect the specification or specification range for any particular property of the product. Furnishing such information is merely an attempt to assist you after you have indicated your contemplated use and shall in no event constitute a warranty of any kind by FLEXcon. All purchasers of FLEXcon products shall be responsible for independently determining the suitability of the material for the purpose for which it is purchased. No distributor, salesman, or representative of FLEXcon is authorized to give any warranty, guaranty, or make any representation in addition or contrary to the above.



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